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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,722	03/13/2006	Hitoshi Tamai	Q92292	9866
23373	7590	10/06/2006		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
			EXAMINER CHEUNG, WILLIAM K	
			ART UNIT 1713	PAPER NUMBER

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,722	<b>Applicant(s)</b> TAMAI, HITOSHI	
	<b>Examiner</b> William K. Cheung	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>040706, 011706</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 7-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasegawa et al. (GB 2303632 A).

*The invention of claims 1-20 relates to a **curable composition** which comprises the following components (A), (B) and (C):*

*Component (A): A **polyoxyalkylene polymer** containing at least one **reactive silyl** group at a molecular chain **terminus**;*

*Component (B): A **polymer** composed of **acrylic acid alkyl ester monomer** units and/or **methacrylic acid alkyl ester monomer** units containing, on the average, at least one **reactive silyl group** in each molecule;*

*Component (C): An **ionic surfactant**.*

Hasegawa et al. (abstract) disclose a curable emulsion composition comprising copolymer prepared by the copolymerization of (a) an alkoxysilane containing a radical-polymerizable group and (b) a vinyl monomer. Because the copolymer containing (a) and (b) is prepared with free radical initiator, which typically will result a random

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copolymer product, the examiner has a reasonable basis that the random nature of the copolymerization will result a copolymer having "at least one silyl group". Therefore, the examiner has a reasonable basis the claimed "a polyoxylylene polymer containing at least one silyl group at a molecular chain terminus" is inherently possessed in the copolymer of Hasegawa et al. Hasegawa et al. disclose a list of suitable alkoxysilane containing a radical-polymerizable group (page 5, line 14 to page 6, line 6) and a list of vinyl monomer (b) (page 6, line 7-17) which includes mostly acrylate(s) and methacrylate(s) based monomers. Since the component (b) of Hasegawa et al. is copolymerized with the component (a) of Hasegawa et al. the resulting polymer would have contain a silyl group.

Regarding the claimed "ionic surfactant", Hasegawa et al. (abstract) clearly disclose the use of anionic or cationic surfactants. Hasegawa et al. (page 12, line 14-17) disclose anionic surfactants having the claimed "sodium alkyl sulfate" and "nitrogen-containing" functional groups as claimed.

Regarding the claimed "curable" feature, the title of Hasegawa et al. clearly indicates that the disclosed composition is curable, and the silyl groups of Hasegawa et al. are also reactive in nature.

Regarding the claimed "sealant for buildings" of claims 18-20, Hasegawa et al. (page 1, line 7-15) clearly disclose using the disclosed composition as an adhesive, sealing materials, paints, coating agents and the like. Therefore, the examiner has a reasonable basis that the claimed "sealant for buildings" is inherently possessed in Hasegawa et al.

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Regarding the claimed compositional requirements of claims 12-17, Hasegawa et al. (page 14, line 20 to page 15, line 3) clearly disclose component (c) ranging from 0.2 to 20 weight %.

Hasegawa et al. contain all the features of claims 1-4, 7-20, Claims 1-4, 7-20 are anticipated.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. (GB 2303632 A) in view of Tsuda et al. (US 6,541,552 B1).

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Set forth from paragraph 2 of instant office action, the curable composition of claims 5-6 is very similar to the curable composition disclosed in Hasegawa et al.

Although Hasegawa et al. do not explicitly indicate that the taught anionic surfactant include a fluorine containing surfactant, the anionic surfactant teachings of Hasegawa et al. generically include the fluorine containing surfactants of claims 5, 6. Further, Tsuda et al. (col. 3, line 66 to col. 4, line 20) clear teach the use fluorine containing anionic surfactants for preparing a composition that is substantially identical to the composition as claimed or the composition disclosed in Hasegawa et al. in view of the monomeric components of Tsuda et al. (col. 5, line 56-64). Therefore, motivated by the expectation of success of obtaining a composition with high gloss and excellent in stain-proofing property, weather resistance and storage stability (col. 1, line 5-14), it would have been obvious to one of ordinary skill in art to incorporate the fluorine containing anionic surfactant teachings of Tsuda et al. into the curable composition teachings of Hasegawa et al. to obtain the invention of claims 5, 6.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571)

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272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



William K. Cheung, Ph. D.

Primary Examiner

September 29, 2006

**WILLIAM K. CHEUNG  
PRIMARY EXAMINER**